LISTING OF THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

~~Claims~~ What is claimed is:

1.   (Currently amended) ~~Device~~ A device for transportation of a flowing medium and/or for heat exchange between ~~a~~ the flowing medium and the device, ~~characterized in that~~ comprising at least one surface ~~of the device is provided with~~ having a plurality of dimples.

2.   (Currently amended) ~~Device~~ The device according to claim 1, wherein the plurality of dimples are arranged periodically.

3.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 1, wherein the plurality of dimples comprises three adjoining dimples each having a center, ~~wherein~~ the centers of three adjoining dimples ~~form~~ forming an equilateral triangle, the distance between the centers of two ~~neighboring~~ adjoining dimples of the equilateral triangle having a first constant value t_2 and the distance between two consecutive rows of the plurality of dimples having a second constant value t_1.

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4.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 1, wherein the plurality of dimples have a two-dimensional edge.

5.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 1, wherein the plurality of dimples are rounded at ~~the~~ an edge towards ~~the~~ a remaining surface.

6.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 1, wherein the plurality of dimples ~~essentially have the form of~~ each comprise a section of a sphere or an ellipsoid.

7.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 1, further comprising a transport channel, wherein the at least one surface ~~with dimples~~ is provided as ~~the~~ an inner surface of ~~said~~ the transport channel.

8.   (Currently amended) ~~Device~~ The device according to claim 7, wherein ~~said~~ the transport channel ~~essentially has the form of~~ comprises a pipe.

9.   (Currently amended) ~~Device~~ The device according ~~to one of the preceding claims~~ claim 1, wherein the at least one surface is provided such that, in the proximity to the at least one surface, vortices are formed in ~~a~~ the flowing medium[[,]] when the flowing medium flows along the at least one surface.

10.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 2, wherein the deposition of particles on ~~said~~ the at least one surface having a periodic dimple structure is reduced in comparison to a flat surface[[,]] when ~~a~~ the flowing medium flows along the at least one surface.

11.   (Currently amended) ~~Device~~ The device according to ~~one of the preceding claims~~ claim 2, wherein the formation of ice on ~~said~~ the at least one surface having a periodic dimple structure is reduced in comparison to a flat surface[[,]] when ~~a~~ the flowing medium flows along the at least one surface, and the at least one surface has a lower temperature than the flowing medium.

12. (Currently amended) ~~Surface~~ A surface along which a medium flows, ~~said~~ the medium consisting of a gas, a liquid, a two-phase mixture, or a mixture of multiple phases, ~~characterized in that said surface comprises~~ the surface comprising dimples, wherein the edges of ~~said~~ the dimples are rounded, thereby forming a central dimple area and at least one curvature area for each dimple[[,]] which continuously connects ~~the~~ each dimple to the surrounding surface.

13. (Currently amended) ~~Surface~~ The surface according to claim 12, wherein ~~said~~ the central dimple area ~~essentially~~ has the form of a section of a sphere or an ellipsoid.

14. (Currently amended) ~~Surface~~ The surface according to claim ~~12 or~~ 13, wherein ~~said~~ the curvature area comprises at least a first curvature area and a second curvature area, the first curvature area having a different curvature than the second curvature area.

15. (Currently amended) ~~Surface~~ The surface according to claim 14, wherein ~~said~~ the first curvature area is rounded

with a first rounding radius and ~~said~~ the second curvature

area is rounded with a second rounding radius.

16. (Currently amended) ~~Surface of~~ The surface

according to claim 15, wherein the central dimple area

~~essentially~~ has the form of a section of a sphere, and the

~~form~~ forms of the central dimple area[[,]] of the first

curvature area and of the second curvature area in a cross

section perpendicular to the surface and through ~~the~~ a center

of the dimple, ~~is~~ are defined by the following parameters:

d_1: ~~D~~diameter of the central dimple area~~,~~;

d_2: ~~O~~outer diameter of the first curvature area~~,~~;

t_1: ~~O~~outer diameter of the second curvature area~~,~~;

R_1, C_1: ~~R~~radius and center point of the sphere, the section

of which forms the surface of the central dimple area~~,~~;

R_2, C_2: ~~R~~radius and center point of the rounding radius of the

first curvature area~~,~~;

R_3, C_3: ~~R~~radius and center point of the rounding radius of the

second curvature area~~,~~;

P_1: ~~T~~transition point from the central dimple area to the first

curvature area~~,~~;

P_2: ~~T~~transition point from the first curvature area to the

second curvature area~~,~~;

P_3: ~~T~~transition point from the second curvature area to the surrounding surface~~,~~;

h_1: ~~D~~difference in height between the lowest point of the central dimple area and the outer rim of the central dimple area~~,~~;

h_2: ~~D~~difference in height between the inner rim of the first curvature area and the outer rim of the first curvature area~~,~~;

h_3: ~~D~~difference in height between the inner rim of the second curvature area and the outer rim of the second curvature area~~,~~;

α_1: ~~A~~angle between the y-axis and a line connecting C_2 and C_3~~,~~;

α_2: ~~A~~angle between the x-axis and a line connecting C_1 and C_2~~,~~;

f: ~~P~~parameter related to the portion of the surface covered by the central dimple area in relation to the combined area of central dimple area and curvature areas~~,~~;

~~wherein~~ a set of parameters~~, in particular the parameters~~ comprising d_1, α_1, α_2, R_2/R_1 and f, are chosen and ~~the~~ a remaining set of parameters are calculated by ~~means of~~ the following equations with a tolerance of ± 10% for each parameter:

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$$R_1 = \frac{d_1}{2 \cdot \sin \alpha_1},$$

$$R_2 = \frac{R_2}{R_1} \cdot \frac{d_1}{2 \cdot \sin \alpha_1},$$

$$R_3 = \frac{t_1 - \frac{d_1}{2} \cdot \frac{R_2}{R_1} \cdot \frac{(1 - \sin \alpha_1)}{\sin \alpha_2}}{\sin \alpha_2},$$

$$h_1 = \frac{d_1}{2} \cdot \frac{(1 - \cos \alpha_1)}{\sin \alpha_1},$$

$$h_2 = R_2 \cdot (\cos \alpha_2 - \cos \alpha_1),$$

$$h_3 = R_3 \cdot (1 - \cos \alpha_2),$$

$$H = h_1 + h_2 + h_3,$$

$$t_1 = \sqrt{\frac{\pi}{6 \cdot f}} \cdot d_1,$$

$$C_1 = (X_{C1}, Y_{C1}) \quad \text{with} \quad X_{C1} = 0, \quad Y_{C1} = R_1 - H,$$

$$C_2 = (X_{C2}, Y_{C2}) \quad \text{with} \quad X_{C2} = \frac{d_1}{2} \cdot \left(1 + \frac{R_2}{R_1}\right), \quad Y_{C2} = R_3 + \frac{X_{C3} - X_{C2}}{tg\alpha_2},$$

$$C_3 = (X_{C3}, Y_{C3}) \quad \text{with} \quad X_{C3} = \frac{t_1}{2}, \quad Y_{C3} = -R_3,$$

$$P_1 = (X_{P1}, Y_{P1}) \quad \text{with} \quad X_{P1} = \frac{d_1}{2}, \quad Y_{P1} = H - h_1,$$

$$P_2 = (X_{P2}, Y_{P2}) \quad \text{with} \quad X_{P2} = \frac{t_1}{2} - R_3 \cdot \sin \alpha_2, \quad Y_{P2} = R_3 \cdot (\cos \alpha_2 - 1),$$

$$P_3 = (X_{P3}, Y_{P3}) \quad \text{with} \quad X_{P3} = \frac{t_1}{2}, \quad Y_{P3} = 0,$$

said the equations being defined in a two-dimensional coordinate-system with ~~the~~ an x-axis in the plane of the surface and with ~~the~~ a y-axis through the center of the dimple and perpendicular to the surface.

17. (Currently amended) ~~Surface~~ The surface according to ~~any of the preceding claims~~ claim 12, wherein ~~said~~ the dimples are arranged periodically on ~~said~~ the surface.

18. (Currently amended) ~~Surface~~ The surface according to ~~any of the preceding claims~~ claim 17, wherein the dimples comprises three adjoining dimples each having a center, the centers of three adjoining dimples ~~form a~~ forming a triangle, the distance between two ~~neighboring~~ adjoining dimples of the triangle having a first constant value t_1 and the distance between two rows of the plurality of dimples having a second constant value t_2.

19. (Currently amended) ~~Surface~~ The surface according to claim 18, wherein the at least one curvature areas of ~~said~~ the three adjoining dimples are in contact with each other.

20.   (Currently amended) ~~Surface~~ The surface according to claim 18 ~~or 19, wherein~~ further comprising additional dimples of a different size ~~are provided, which are~~ located in the center of the three ~~respective~~ adjoining dimples.

21. through 24. (Cancelled)

25.   (Currently amended) ~~Device~~ A device for transportation of a flowing medium, comprising at least one surface with dimples according to ~~one of claims~~ claim 12 ~~to 24~~.

26.   (Currently amended) ~~Device~~ The device according to claim 25, comprising a transport channel, wherein the at least one surface ~~with dimples~~ is provided as the inner surface of ~~said~~ the transport channel.

27.   (Currently amended) ~~Device~~ The device according to claim 26, wherein ~~said~~ the transport channel is a pipe.

28.   (Currently amended) ~~Device~~ The device according to ~~one of claims~~ claim 25, ~~to 27, characterized in that~~ comprising at least one surface, wherein the deposition of particles on ~~said~~ the at least one surface is reduced in

comparison to an otherwise identical device with a flat
surface.

29.   (Currently amended) ~~Device~~ The device according
to claim 25 for heat exchange between ~~a~~ the flowing medium
and at least one surface ~~of the device~~, wherein the at least
one surface is ~~provided with dimples according to one of
claims 12 to 24, in particular provided as a~~ part of an
air-conditioning system.

30.   (Currently amended) ~~Device~~ The device according
to claim 29, ~~characterized in that~~ comprising at least one
surface, wherein the ~~forming~~ formation of ice on ~~said~~ the at
least one surface is reduced in comparison to an otherwise
identical device with a flat surface.

31.   (Currently amended) ~~Layer~~ A layer for applying on
a surface, wherein ~~said~~ the layer comprises a surface
according to claim 1 ~~with dimples according to one of claims 1
to 13~~.

32.   (Currently amended) ~~Layer~~ The layer according to
claim 31, ~~having~~ further comprising a first side and a second
side, ~~characterized in that said~~ wherein the first side

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comprises dimples ~~according to one of claims 12 to 24~~ and ~~said~~ the second side is self-adhesive.

33. (Currently amended) ~~Method~~ A method for producing a surface ~~with~~ having reduced particle deposition and/or reduced ice formation and/or reduced friction resistance and/or improved heat exchange with a surrounding medium, comprising the step of

[[-]] applying ~~a~~ the layer according to claim 31 ~~or 32~~ onto ~~said~~ the surface.

34. (Currently amended) ~~A~~ The method according to claim 33, for producing a surface ~~with~~ having reduced particle deposition and/or reduced ice formation and/or reduced friction resistance and/or improved heat exchange with a surrounding medium, further comprising the steps of

[[-]] providing a workpiece with at least one surface; and

[[-]] imprinting into ~~said~~ the at least one surface a structure comprising dimples~~, in particular generating a surface according to one of claims 12 to 24~~.

35. (Currently amended) ~~Method~~ The method for producing a surface according to claim 34 ~~with~~ having reduced particle deposition and/or reduced ice formation and/or reduced

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friction resistance and/or improved heat exchange with a surrounding medium, comprising the steps of

[[-]] providing a casting mold with at least one structured surface; and

[[-]] molding, ~~in particular injection molding,~~ of a workpiece with at least one surface comprising dimples, ~~in particular a surface according to one of claims 12 to 24~~ by ~~means of said~~ casting mold.

36.   (Currently amended) ~~Application of~~ The method according to claim 35, further comprising the step of applying ~~a~~ the at least one surface comprising dimples ~~according to one of claims 12 to 24~~ as ~~a~~ the surface of:

[[-]] a device for transportation of a medium or

[[-]] a device for heat exchange.

37.   (Currently amended) ~~Application of~~ The method according to claim 36, further comprising the step of applying ~~a~~ the device ~~according to one of the claims 1 to 11 or 25 to 30~~ in an air-conditioning system.

38.   (Currently amended) ~~Application of~~ The method according to claim 35, further comprising the step of applying ~~a~~ the at least one surface comprising ~~a plurality~~

~~of~~ dimples as a surface of a flow channel for reducing the deposition of particles~~,~~ and/or for reducing ice formation when a medium flows along the surface.

39. (Cancelled)

40. (Currently amended) ~~Air-conditioning~~ An air-conditioning system for cooling a heat exchange medium, comprising the at least one flow channel according to claim 38 for the heat exchange medium, wherein ~~the flow channel is in particular provided as a device according to one of the claims 1 to 11 or 25 to 30,~~ the inner surface of ~~said~~ the at least one flow channel ~~being~~ is provided with a plurality of dimples.

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